

workers, soldiers and eggs. The *Ahamitermes* nest, which was densely populated, consisted of a mass of flattish dark-coloured cells, and from this central nest area galleries extended throughout the *Coptotermes* mound, frequently running alongside *Coptotermes* galleries but always clearly separated from them by a thin wall.

*Affinities.*

*Ahamitermes inclusus* is distinguishable from *A. hillii* Nicholls, also from Western Australia, by the generally smaller size and much paler colour of the queen. In the soldier caste it is separated from *A. hillii* by its smaller size, parallel-sided head, the short antennae and the relatively short, stout mandibles.

*Types*.—Holotype soldier, morphotype dealated adult female and worker in Division of Entomology Museum, Canberra.

*Reference*

HILL, G. F., 1942.—"Termites (Isoptera) from the Australian Region". Melbourne, 479 pp.

## NOTES AND DESCRIPTIONS OF AUSTRALIAN CHLOROPIDAE (DIPTERA).

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(Communicated by Mr. D. J. Lee.)

(Five Text-figures.)

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In the last three parts of his long series of papers entitled "Notes on Australian Diptera", J. R. Malloch presented an extensive revision of the family Chloropidae in Australia and Tasmania (PROC. LINN. SOC. N.S.W., 63: 334-356, 1938; 65: 261-288, 1940; 66: 41-64, 1941). Citations to that basic revision will be abbreviated here to date and page. The following notes will clarify a few problems, as well as make known a few new forms. Great as was the number of new species described by Malloch in this family, I have no doubt that many more remain to be discovered in Australia, especially in the western part of the continent. However, in these tiny flies the recognition of new forms and their satisfactory separation from described forms will seldom be an easy task, especially on the basis of published descriptions alone. In certain large genera, in particular, one will almost surely have to have good series of specimens in at least fairly good condition, except for unusually distinct species.

## Subfamily CHLOROPINAE.

## PACHYLOPHUS Loew.

Three species, all described by Malloch, have hitherto been known from Australia, and a key to these was presented by Malloch (1927, PROC. LINN. SOC. N.S.W., 52: 428). From relatively limited material seen thus far, I suspect that *P. secundus* Malloch is only a dark colour form, or perhaps the fully matured form of *P. luteus* Malloch (correction for *lutea*!). The third species, *P. alienus* Malloch, is very little different, unless the stated formula of 1 + 1 for the notopleural bristles proves to be a consistent feature.

The character of hairy mesopleura, used by Malloch for *Pachylophus* in his key to the genera of Australian Chloropidae (1938, p. 334), is not characteristic of the genus as a whole. The species *P. rufescens*, recorded here from Australia for the first time, has the mesopleura bare, a feature which will distinguish it at once from the species described by Malloch.

## PACHYLOPHUS RUFESCENS (Meijere).

*Myrmomorpha rufescens* Meijere, 1904, *Bijdr. Dierkunde*, 17: 113 (Java).  
*Pachylophus rufescens* (Meijere) Becker, 1911, *Ann. Mus. Nat. Hungarici*, 9: 41.

I have before me eight specimens from Burpengary, Queensland (Dr. T. L. Bancroft, seven labelled "5-12-99"), which appear to be this wide-ranging Oriental species. In addition to the type series, I have seen the species from the Simla Hills in North India, Coimbatore in South India, Calcutta, North-east Assam, Upper Burma, Tientsin, China, and Sumatra, and there are published records also from Formosa and Ceylon. The species is somewhat variable in colour, but generally the frontal triangle is entirely black and the thorax reddish with indistinct stripes, the median one blackened on the anterior slope of the mesonotum. The mesonotum and scutellum are brownish-grey pollinose and somewhat dull, while the pleura are polished and entirely reddish. These colour characters are quite different from those described by Malloch for the three species already recorded from Australia, and will further distinguish *P. rufescens*.

CHLOROPS Meigen (= *Oscinis* Latreille).

There has been an unfortunate confusion in the use of the generic name *Oscinis*. *Oscinis* of authors, especially of the last century, referred to the small, usually black chloropids of the subfamily Oscinellinae, now called *Oscinella*, *Oscinosoma*, *Conioscinella*, etc. Even among those who recognize that *Oscinis*, in the strict sense, refers to certain predominantly yellow and black striped chloropids of the typical subfamily Chloropinae, some synonymize *Oscinis* with *Chlorops* and some maintain the two as distinct genera. I follow the former course.

## CHLOROPS SULCATA Becker.

*Chlorops sulcata* Becker, 1911, *Ann. Mus. Nat. Hungarici*, 9: 58 (New South Wales).

*Oscinis federata* Malloch (1938, pp. 338, 341) must be very close to Becker's species, from the descriptions of the two. I suggest that they are probably synonyms.

## CHLOROPS ALBIFRONS Walker.

*Chlorops albifrons* Walker, 1849, *List Dipterous Ins. British Mus.*, 4: 1121 (Adelaide, South Australia). *Oscinis canaliculata* var. *trisulcata* Malloch, 1938, p. 345 (New South Wales, Austral. Cap. Terr.). [*New Synonymy.*]

I have seen the type of *albifrons* in the British Museum (Nat. Hist.), and it agrees perfectly with Malloch's description of *trisulcata*. Malloch's two guesses as to the identity of *albifrons*, either as a species with smooth ungrooved frontal triangle (1931, *Proc. Linn. Soc. N.S.W.*, 56: 73), or as equal to *Chloromerus gracilis* Malloch (cf. 1938, p. 336), are incorrect. Incidentally, this Australian form is quite a different species from the Formosan *Chlorops canaliculata* Becker, of which I have seen the type series in the Hungarian National Museum.

## CHLOROPS AUSTRALIENSIS, n. sp.

Yellow and black species with smooth frontal triangle, polished black mesonotal stripes, black palpi, and predominantly black femora.

Male, female.—Head yellow, frontal triangle dark reddish-brown to black, occiput above with median black stripe of same width as triangle joining a transverse black band between the eyes and above the foramen, palpus entirely black, median clypeal plate brown on sides, and antenna reddish-yellow basally with distal three-fifths of third segment and the arista black. Thorax with yellow ground colour, marked with black as follows: three broad mesonotal stripes and two supra-alar vittulae, small spot on each humerus, the metanotum, and large spots on meso-, ptero-, sterno-, and hypopleuron, the upper half of pleuron otherwise rather suffused reddish; scutellum brown to blackish on sides, sometimes leaving only a narrow median area and apex yellow. Abdomen reddish-brown, fourth and fifth segments with distal yellow margins. Legs with fore coxa laterally at base, all femora narrowly at base and apex, and hind tibia centrally black; fore and mid tibiae obscurely brownish in some specimens, and fore tarsus entirely and others distally somewhat browned. Halter with light brown stalk and conspicuously whitish knob. Wings hyaline, veins brown, membrane brownish tinted. Bristles and hairs black.

Head with front parallel-sided, approximately square, at vertex twice the width of an eye and slightly more than half the width of the head, sparsely haired; ocellar tubercle grey pruinose; frontal triangle polished and glabrous, at base barely more than two-thirds the width of front and thus well separated from eyes, long and acuminate, the sides slightly convex, converging strongly about two-thirds the length of triangle, which then continues to anterior margin of front in a narrow tapering prolongation. Head in profile with greatest length and height subequal, the front projecting slightly before the eyes and face receding, greatest length of head 1.75 times the length of lower margin of head; eye large and rounded, cheek one-fifth the height of an eye and two-thirds the breadth of third antennal segment, the latter slightly longer than broad and with concave upper margin. Arista short pubescent, base rather thick. Ocellar bristles proclinate and divergent, much longer than postverticals, but shorter than verticals; six pairs of orbital bristles, the upper two pairs longer than the others.

Mesonotum grey to brownish pollinose outside of the stripes, the lines of pollen separating stripes and outlining them clearly, stripes polished but the shine interrupted by numerous, coarse, piliferous punctures; metanotum heavily leaden-grey pollinose; pleuron predominantly smooth and polished, grey pruinose on narrow postero-dorsal corner of mesopleuron, the pteropleuron posteriorly and the hypopleuron. Notopleural bristles 1 + 2, anterior somewhat weaker than others. Scutellum narrowly rounded apically, not quite three-fourths as long as broad at base; apical scutellar bristles longer than scutellum and inserted rather close together, with bases separated by a distance barely greater than that between posterior ocelli; subapical pair rather short, inserted as near to the apicals as the latter are from each other; disc of scutellum moderately setose. Abdomen shining, thinly and finely pollinose. Legs slender, hind tibia without sensory area.

Wing with second costal sector 1.7 times third sector; second vein almost straight until its apical fifth or sixth, marginal cell relatively narrow, at its midpoint little more than half the width of submarginal cell immediately opposite; third and fourth veins widely divergent, the width of apical cell measured between ends of third and fourth veins 1.7 times its width opposite hind crossvein; ultimate section of fourth vein a fine line, not arched, practically straight to margin of wing; penultimate section of fourth vein 1.8 times length of penultimate section of third vein and equal to ultimate section of fifth vein; small crossvein slightly beyond middle of discal cell, but proximad apex of first vein.

Length, 2.5–2.75 mm.

Holotype, female, Molonglo River, A.C.T., March 20, 1930 (L. F. Graham). Paratypes: female, same data as type; female, Illawarra, New South Wales (H. Petersen); female, Blundell's, A.C.T., Jan., 1930 (A. Tonnoir); male, Como, New South Wales, Dec., 1923 (H. Petersen; swept from flowers); male, Mangalore, Tasmania, Nov. 15, 1911 (A. White). Type and two paratypes to be returned to collection of the School of Public Health and Tropical Medicine, University of Sydney; two paratypes in U.S. National Museum, Washington; paratype (Tasmania) in British Museum (Nat. Hist.).

The male from Como has the third and fourth veins less widely divergent, but otherwise is essentially similar to the holotype.

The smooth unfurrowed triangle and black arista and palpus will distinguish this species from most of the *Chlorops* previously described from Australia. In Malloch's key to *Oscinis* (1938, p. 338), it will pass to couplet 15 and is close to *O. botanica* Malloch, but differs from the latter by having the penultimate section of fourth vein subequal to ultimate section of fifth, and scutellum not entirely black.

#### DIPLOTOXA Loew.

The genus *Diplotoxa* is weakly represented from the Australasian region, there being known at present only *D. tasmaniensis* Malloch (1927) from Tasmania and three species described by Malloch from New Zealand. It may be, however, that many more species remain to be discovered when the fauna of tiny flies is more thoroughly known. In the material before me there appear to be four new species, of which one from Victoria is described below. Two specimens from Ohakune, New Zealand, are in poor condition and will not be described, but it is possible to recognize from available characters that at least one represents a new species, and perhaps the other also. Still another specimen, from Illawarra, New South Wales (H. Petersen), may be new or it may be only a variant of *D. tasmaniensis*. Description of species, if new, should await the discovery of adequate and satisfactory material.

#### DIPLOTOXA VICTORIENSIS, n. sp.

Tiny species, with frontal triangle smooth and polished black, and thorax entirely black except for narrow yellow median stripe of scutellum.

Male.—Predominantly black, marked with yellow as follows: Front outside frontal triangle, face, cheek except for narrow brown oral margin, palpus, prosternum, all coxae, trochanters, ends of all femora broadly (approximately one-fourth at each end), tibiae



chiefly, and all tarsi except brown distal segment; hind tibia indistinctly browned centrally, the others faintly so; antenna with arista and dorsal two-fifths of third segment black, the rest orange-yellow; scutellum with narrow orange median stripe, to and including the apex; halter with large white knob and dark yellow stalk; bristles black or brownish-black.

Head: Front slightly broader than long and twice the width of an eye; frontal triangle at base nearly touching each eye, smooth and ungrooved, apparently entirely polished but under high power with indistinctly bounded central area of fine sparse pollen encompassing the ocellar tubercle and an approximately equivalent area anterior to it; sides of triangle slightly convex posteriorly, then curving inward on anterior one-third and becoming concave as the triangle tapers acuminate, apex at anterior margin of front. Head in profile slightly higher than long, the eyes large and very convex; cheek narrow, one-tenth the eye height and one-third breadth of third antennal segment, the latter very slightly longer than broad, and with microscopically pubescent arista; median clypeal plate polished black. Outer vertical bristles long and strong, the others weak and scarcely distinguishable from hairs, including four pairs of short, regularly spaced orbitals.

Thorax subshining, thinly dark grey pollinose except for polished black sternopleuron, anteroventral half of mesopleuron, lower fourth of pteropleuron, and the propleuron chiefly. Notopleural bristles 1 + 2, only the lower posterior bristle long and evident, the others hair-like. Scutellum short and rounded apically, with a pair of long apical bristles, widely separated at base, converging towards tips, the usual subapical scutellars weak and but little stronger than hairs.

Abdomen shining, but apparently thinly pollinose on dorsum. Legs slender, hind tibia without sensory area. Wing venation approximately as figured by Malloch (1938, p. 340, fig. 1) for *D. tasmaniensis*, the crossveins separated by no more than length of the anterior one.

Length of body, 1.25 mm.; of wing, 1.5 mm.

Holotype, male, Victoria, Australia (C. French). In the British Museum (Nat. Hist.).

This species is in the same limited group of small species as *D. tasmaniensis*, but the latter is a predominantly yellow species with three black mesonotal stripes. The three described New Zealand species (cf. key by Malloch, 1931, *Records Canterbury Mus.*, 3: 416) are much larger (2.5 and 3 mm.) and differ from *victoriensis* in a number of distinct characters.

As Malloch pointed out for *tasmaniensis*, the new species is also related to the Palaearctic *approximatonervis* Zetterstedt. It may be noted that European monographers have referred the latter to the genus *Lasiosina*. If true, that generic assignment must also be made for these two Australian species. However, generic limits form a difficult problem in the Chloropidae, and for the present I shall continue the use of the name *Diptotoxa* for *tasmaniensis* and *victoriensis*.

#### THAUMATOMYIA Zenker (= *Chloropisca* Loew).

In my opinion, *Thaumatomyia* and *Chloropisca* cannot be maintained as distinct genera, though some workers do so. The relation of the two was discussed in detail by Sabrosky (1943, *Canad. Ent.*, 75: 116-117). Malloch's proposed restriction of *Chloropisca* to species with hairs on the mesopleuron (1938, p. 353) does not affect the problem of the use of the two names, as the type species of both have that character. Malloch used the name *Chloropisca* throughout his work on the Australian fauna.

#### THAUMATOMYIA MALLOCHI, new name.

*Chloropisca monticola* Malloch, 1927, *Proc. Linn. Soc. N.S.W.*, 52: 430. Preoccupied. Primary homonym of *Chloropisca monticola* Becker, 1912, *Ann. Mus. Nat. Hungarici* 10: 30.